

ABSTRACT

Disclosed is an emitter composition of a field emission cell that is printed on a cathode substrate of a display to be applied to an electron emission source, including a carbon nanotube, a binder, glass frit, a dispersing agent and an organic solvent, characterized by further having 0.1-20 w% of diamond. Further, a manufacturing method of the emitter composition and a field emission cell using the emitter composition are also provided. In the current invention, since the field emission cell has the carbon nanotube and the diamond distributed simultaneously therein, it has a relatively high current density even at the same driving voltage, thereby improving emitting properties. In addition, the field emission cell is advantageous in terms of superior printability and stable field emission, while reducing various expenses required to operate and repair constitutive parts thereof.